

AN 1992-365827 JAPIO
TI EXTRA-HIGH STRENGTH FINE WIRE AND PRODUCTION THEREOF
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PA FURUKAWA ELECTRIC CO LTD:THE
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SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1992
AB PURPOSE: To develop the fine wire which consists of a Cu alloy, has high
strength and excellent flexibility and is usable as supporting wires of
electronic and electric equipment and apparatus, movable cables of robot
equipment and further, reinforcing materials of sporting goods, etc.
CONSTITUTION: This extra-high strength fine wire contains 10 to 20wt.% Mn
and 5 to 9wt.% Al, and further, contains 2 to 10wt.% Ni and consists of
the balance Cu and unavoidable impurities. Its alloy structure is lamellar
in a working direction. This fine wire is produced by the method
consisting in dissolving and casting such Cu alloy, then solidifying the
alloy at $\leq 200^{\circ}\text{C}/\text{min}$ cooling rate to obtain a lamellar eutectic
structure and subjecting the alloy to one time or ≥ 2 times of cold
working and heat treatment in combination to obtain the dense lamellar
structure elongated in the working direction. The reduction of area in one
time of the cold working is specified to $\geq 50\%$ and the heat treatment
which follows the cold working is executed for 20 seconds to 6 hours at
400 to 850°C .
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